

## **RAW SEQUENCE LISTING**

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Information Center (STIC) no errors detected.**

Application Serial Number: 10/539,723  
Source: P4/10  
Date Processed by STIC: 7/12/05

# ***ENTERED***



PCT

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DATE: 07/12/2005

PATENT APPLICATION: US/10/539,723

TIME: 10:02:55

Input Set : N:\RJAVED\10539723.txt

Output Set: N:\CRF4\07122005\J539723.raw

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3 <110> APPLICANT: Bayer CropScience GmbH
5 <120> TITLE OF INVENTION: Plant cells and plants which synthesize a starch with an
increased final
6     viscosity
8 <130> FILE REFERENCE: BCS 02 5002 - PCT
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/539,723
C--> 10 <141> CURRENT FILING DATE: 2005-06-20
10 <150> PRIOR APPLICATION NUMBER: EP 02028530.0
11 <151> PRIOR FILING DATE: 2002-12-19
13 <150> PRIOR APPLICATION NUMBER: EP 03090275.3
14 <151> PRIOR FILING DATE: 2003-08-29
16 <160> NUMBER OF SEQ ID NOS: 8
18 <170> SOFTWARE: PatentIn version 3.1
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 4167
22 <212> TYPE: DNA
23 <213> ORGANISM: Solanum tuberosum
25 <220> FEATURE:
26 <221> NAME/KEY: CDS
27 <222> LOCATION: (207)..(3899)
28 <223> OTHER INFORMATION:
31 <300> PUBLICATION INFORMATION:
32 <301> AUTHORS: Abel,G.J., Springer,F., Willmitzer,L. and Kossmann,J.
33 <302> TITLE: Cloning and functional analysis of a cDNA encoding a novel 139 kDa
34 <303> JOURNAL: Plant J.
35 <304> VOLUME: 10
36 <305> ISSUE: 6
37 <306> PAGES: 981-991
38 <307> DATE: 1996
39 <308> DATABASE ACCESSION NO: X94400
40 <309> DATABASE ENTRY DATE: 1995-12-22
41 <313> RELEVANT RESIDUES: (1)..(4167)
43 <300> PUBLICATION INFORMATION:
44 <308> DATABASE ACCESSION NO: EMBL / X94400
45 <309> DATABASE ENTRY DATE: 1997-04-16
46 <313> RELEVANT RESIDUES: (1)..(4167)
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49 ttttttaata gattttttaaa accccattaa agcaaatacg tatataattg cagcacagat      60
51 acagagaggg agagagaaag atagtgtgtt gatgaaggag aagagagata tttcacatgg      120
53 gatgttctat ttgattctgt ggtgaacaag agttttacaa agaacattcc tttttctttt      180
55 tttcttggtt cttgtgtggg tcagcc atg gat gtt cca ttt cca ctg cat aga      233
56                                     Met Asp Val Pro Phe Pro Leu His Arg
57                                     1                               5
59 cca ttg agt tgc aca agt gtc tcc aat gca ata acc cac ctc aag atc      281

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60 Pro Leu Ser Cys Thr Ser Val Ser Asn Ala Ile Thr His Leu Lys Ile
61 10          15          20          25
63 aaa cct ttt ctt ggg ttt gtc tct cat gga acc aca agt cta tca gta      329
64 Lys Pro Phe Leu Gly Phe Val Ser His Gly Thr Thr Ser Leu Ser Val
65          30          35          40
67 caa tct tct tca tgg agg aag gat gga atg gtt act ggg gtt tca ttt      377
68 Gln Ser Ser Ser Trp Arg Lys Asp Gly Met Val Thr Gly Val Ser Phe
69          45          50          55
71 cca ttt tgt gca aat ctc tcg gga aga aga cgg aga aaa gtt tca act      425
72 Pro Phe Cys Ala Asn Leu Ser Gly Arg Arg Arg Arg Lys Val Ser Thr
73          60          65          70
75 act agg agt caa gga tct tca cct aag ggg ttt gtg cca agg aag ccc      473
76 Thr Arg Ser Gln Gly Ser Ser Pro Lys Gly Phe Val Pro Arg Lys Pro
77          75          80          85
79 tca ggg atg agc acg caa aga aag gtt cag aag agc aat ggt gat aaa      521
80 Ser Gly Met Ser Thr Gln Arg Lys Val Gln Lys Ser Asn Gly Asp Lys
81 90          95          100          105
83 gaa agt caa agt act tca aca tct aaa gaa tct gaa att tcc aac cag      569
84 Glu Ser Gln Ser Thr Ser Thr Ser Lys Glu Ser Glu Ile Ser Asn Gln
85          110          115          120
87 aag acg gtt gaa gca aga gtt gaa act agt gac gat gac act aaa gta      617
88 Lys Thr Val Glu Ala Arg Val Glu Thr Ser Asp Asp Asp Thr Lys Val
89          125          130          135
91 gtg gtg agg gac cac aag ttt ctg gag gat gag gat gaa atc aat ggt      665
92 Val Val Arg Asp His Lys Phe Leu Glu Asp Glu Asp Glu Ile Asn Gly
93          140          145          150
95 tct act aaa tca ata agt atg tca cct gtt cgt gta tca tct caa ttt      713
96 Ser Thr Lys Ser Ile Ser Met Ser Pro Val Arg Val Ser Ser Gln Phe
97          155          160          165
99 gtt gaa agt gaa gaa act ggt ggt gat gac aag gat gct gta aag tta      761
100 Val Glu Ser Glu Glu Thr Gly Gly Asp Asp Lys Asp Ala Val Lys Leu
101 170          175          180          185
103 aac aaa tca aag aga tcg gaa gag agt gat ttt cta att gat tct gta      809
104 Asn Lys Ser Lys Arg Ser Glu Glu Ser Asp Phe Leu Ile Asp Ser Val
105          190          195          200
107 ata aga gaa caa agt gga tct cag ggg gaa act aat gcc agt agc aag      857
108 Ile Arg Glu Gln Ser Gly Ser Gln Gly Glu Thr Asn Ala Ser Ser Lys
109          205          210          215
111 gga agc cat gct gtg ggt aca aaa ctt tat gag ata ttg cag gtg gat      905
112 Gly Ser His Ala Val Gly Thr Lys Leu Tyr Glu Ile Leu Gln Val Asp
113          220          225          230
115 gtt gag cca caa caa ttg aaa gaa aat aat gct ggg aat gtt gaa tac      953
116 Val Glu Pro Gln Gln Leu Lys Glu Asn Asn Ala Gly Asn Val Glu Tyr
117          235          240          245
119 aaa gga cct gta gca agt aag cta ttg gaa att act aag gct agt gat      1001
120 Lys Gly Pro Val Ala Ser Lys Leu Leu Glu Ile Thr Lys Ala Ser Asp
121 250          255          260          265
123 gtg gaa cac act gaa agc aat gag att gat gac tta gac act aat agt      1049
124 Val Glu His Thr Glu Ser Asn Glu Ile Asp Asp Leu Asp Thr Asn Ser

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|     |   |     |     |     |     |     |      |
|-----|---|-----|-----|-----|-----|-----|------|
| 125 |   | 270 |     | 275 |     | 280 |      |
| 127 | ttc ttt aaa tca gat tta att gaa gag gat gag cca tta gct gca gga |     |     |     |     |     | 1097 |
| 128 | Phe Phe Lys Ser Asp Leu Ile Glu Glu Asp Glu Pro Leu Ala Ala Gly |     |     |     |     |     |      |
| 129 |   | 285 |     | 290 |     | 295 |      |
| 131 | aca gtg gag act gga gat tct tct cta aac tta aga ttg gag atg gaa |     |     |     |     |     | 1145 |
| 132 | Thr Val Glu Thr Gly Asp Ser Ser Leu Asn Leu Arg Leu Glu Met Glu |     |     |     |     |     |      |
| 133 |   | 300 |     | 305 |     | 310 |      |
| 135 | gca aat cta cgt agg cag gct ata gaa agg ctt gcc gag gaa aat tta |     |     |     |     |     | 1193 |
| 136 | Ala Asn Leu Arg Arg Gln Ala Ile Glu Arg Leu Ala Glu Glu Asn Leu |     |     |     |     |     |      |
| 137 |   | 315 |     | 320 |     | 325 |      |
| 139 | ttg caa ggg atc aga tta ttt tgt ttt cca gag gtt gta aaa cct gat |     |     |     |     |     | 1241 |
| 140 | Leu Gln Gly Ile Arg Leu Phe Cys Phe Pro Glu Val Val Lys Pro Asp |     |     |     |     |     |      |
| 141 | 330   |     | 335 |     | 340 |     | 345  |
| 143 | gaa gat gtc gag ata ttt ctt aac aga ggt ctt tcc act ttg aag aat |     |     |     |     |     | 1289 |
| 144 | Glu Asp Val Glu Ile Phe Leu Asn Arg Gly Leu Ser Thr Leu Lys Asn |     |     |     |     |     |      |
| 145 |   | 350 |     | 355 |     | 360 |      |
| 147 | gag tct gat gtc ttg att atg gga gct ttt aat gag tgg cgc tat agg |     |     |     |     |     | 1337 |
| 148 | Glu Ser Asp Val Leu Ile Met Gly Ala Phe Asn Glu Trp Arg Tyr Arg |     |     |     |     |     |      |
| 149 |   | 365 |     | 370 |     | 375 |      |
| 151 | tct ttt act aca agg cta act gag act cat ctc aat gga gat tgg tgg |     |     |     |     |     | 1385 |
| 152 | Ser Phe Thr Thr Arg Leu Thr Glu Thr His Leu Asn Gly Asp Trp Trp |     |     |     |     |     |      |
| 153 |   | 380 |     | 385 |     | 390 |      |
| 155 | tct tgc aag atc cat gtt ccc aag gaa gca tac agg gct gat ttt gtg |     |     |     |     |     | 1433 |
| 156 | Ser Cys Lys Ile His Val Pro Lys Glu Ala Tyr Arg Ala Asp Phe Val |     |     |     |     |     |      |
| 157 |   | 395 |     | 400 |     | 405 |      |
| 159 | ttt ttt aat gga caa gat gtc tat gac aac aat gat gga aat gac ttc |     |     |     |     |     | 1481 |
| 160 | Phe Phe Asn Gly Gln Asp Val Tyr Asp Asn Asn Asp Gly Asn Asp Phe |     |     |     |     |     |      |
| 161 | 410   |     | 415 |     | 420 |     | 425  |
| 163 | agt ata act gtg aaa ggt ggt atg caa atc att gac ttt gaa aat ttc |     |     |     |     |     | 1529 |
| 164 | Ser Ile Thr Val Lys Gly Gly Met Gln Ile Ile Asp Phe Glu Asn Phe |     |     |     |     |     |      |
| 165 |   | 430 |     | 435 |     | 440 |      |
| 167 | ttg ctt gag gag aaa tgg aga gaa cag gag aaa ctt gct aaa gaa caa |     |     |     |     |     | 1577 |
| 168 | Leu Leu Glu Glu Lys Trp Arg Glu Gln Glu Lys Leu Ala Lys Glu Gln |     |     |     |     |     |      |
| 169 |   | 445 |     | 450 |     | 455 |      |
| 171 | gct gaa aga gaa aga cta gcg gaa gaa caa aga cga ata gaa gca gag |     |     |     |     |     | 1625 |
| 172 | Ala Glu Arg Glu Arg Leu Ala Glu Glu Gln Arg Arg Ile Glu Ala Glu |     |     |     |     |     |      |
| 173 |   | 460 |     | 465 |     | 470 |      |
| 175 | aaa gct gaa att gaa gct gac aga gca caa gca aag gaa gag gct gca |     |     |     |     |     | 1673 |
| 176 | Lys Ala Glu Ile Glu Ala Asp Arg Ala Gln Ala Lys Glu Glu Ala Ala |     |     |     |     |     |      |
| 177 |   | 475 |     | 480 |     | 485 |      |
| 179 | aag aaa aag aaa gta ttg cga gaa ttg atg gta aaa gcc acg aag act |     |     |     |     |     | 1721 |
| 180 | Lys Lys Lys Lys Val Leu Arg Glu Leu Met Val Lys Ala Thr Lys Thr |     |     |     |     |     |      |
| 181 | 490   |     | 495 |     | 500 |     | 505  |
| 183 | cgt gat atc acg tgg tac ata gag cca agt gaa ttt aaa tgc gag gac |     |     |     |     |     | 1769 |
| 184 | Arg Asp Ile Thr Trp Tyr Ile Glu Pro Ser Glu Phe Lys Cys Glu Asp |     |     |     |     |     |      |
| 185 |   | 510 |     | 515 |     | 520 |      |
| 187 | aag gtc agg tta tac tat aac aaa agt tca ggt cct ctc tcc cat gct |     |     |     |     |     | 1817 |
| 188 | Lys Val Arg Leu Tyr Tyr Asn Lys Ser Ser Gly Pro Leu Ser His Ala |     |     |     |     |     |      |
| 189 |   | 525 |     | 530 |     | 535 |      |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 191 | aag | gac | ttg | tgg | atc | cac | gga | gga | tat | aat | aat | tgg | aag | gat | ggt | ttg | 1865 |
| 192 | Lys | Asp | Leu | Trp | Ile | His | Gly | Gly | Tyr | Asn | Asn | Trp | Lys | Asp | Gly | Leu |      |
| 193 |     |     | 540 |     |     |     |     | 545 |     |     |     |     | 550 |     |     |     |      |
| 195 | tct | att | gtc | aaa | aag | ctt | ggt | aaa | tct | gag | aga | ata | gat | ggt | gat | tgg | 1913 |
| 196 | Ser | Ile | Val | Lys | Lys | Leu | Val | Lys | Ser | Glu | Arg | Ile | Asp | Gly | Asp | Trp |      |
| 197 |     |     | 555 |     |     |     |     | 560 |     |     |     |     | 565 |     |     |     |      |
| 199 | tgg | tat | aca | gag | ggt | ggt | att | cct | gat | cag | gca | ctt | ttc | ttg | gat | tgg | 1961 |
| 200 | Trp | Tyr | Thr | Glu | Val | Val | Ile | Pro | Asp | Gln | Ala | Leu | Phe | Leu | Asp | Trp |      |
| 201 | 570 |     |     |     |     |     | 575 |     |     |     | 580 |     |     |     |     | 585 |      |
| 203 | ggt | ttt | gct | gat | ggt | cca | ccc | aag | cat | gcc | att | gct | tat | gat | aac | aat | 2009 |
| 204 | Val | Phe | Ala | Asp | Gly | Pro | Pro | Lys | His | Ala | Ile | Ala | Tyr | Asp | Asn | Asn |      |
| 205 |     |     |     |     | 590 |     |     |     |     | 595 |     |     |     |     | 600 |     |      |
| 207 | cac | cgc | caa | gac | ttc | cat | gcc | att | gtc | ccc | aac | cac | att | ccg | gag | gaa | 2057 |
| 208 | His | Arg | Gln | Asp | Phe | His | Ala | Ile | Val | Pro | Asn | His | Ile | Pro | Glu | Glu |      |
| 209 |     |     | 605 |     |     |     |     |     | 610 |     |     |     |     | 615 |     |     |      |
| 211 | tta | tat | tgg | ggt | gag | gaa | gaa | cat | cag | atc | ttt | aag | aca | ctt | cag | gag | 2105 |
| 212 | Leu | Tyr | Trp | Val | Glu | Glu | Glu | His | Gln | Ile | Phe | Lys | Thr | Leu | Gln | Glu |      |
| 213 |     |     | 620 |     |     |     |     | 625 |     |     |     |     | 630 |     |     |     |      |
| 215 | gag | aga | agg | ctt | aga | gaa | gcg | gct | atg | cgt | gct | aag | ggt | gaa | aaa | aca | 2153 |
| 216 | Glu | Arg | Arg | Leu | Arg | Glu | Ala | Ala | Met | Arg | Ala | Lys | Val | Glu | Lys | Thr |      |
| 217 |     | 635 |     |     |     |     | 640 |     |     |     | 645 |     |     |     |     |     |      |
| 219 | gca | ctt | ctg | aaa | act | gaa | aca | aag | gaa | aga | act | atg | aaa | tca | ttt | tta | 2201 |
| 220 | Ala | Leu | Leu | Lys | Thr | Glu | Thr | Lys | Glu | Arg | Thr | Met | Lys | Ser | Phe | Leu |      |
| 221 | 650 |     |     |     |     | 655 |     |     |     | 660 |     |     |     |     | 665 |     |      |
| 223 | ctg | tct | cag | aag | cat | gta | gta | tat | act | gag | cct | ctt | gat | atc | caa | gct | 2249 |
| 224 | Leu | Ser | Gln | Lys | His | Val | Val | Tyr | Thr | Glu | Pro | Leu | Asp | Ile | Gln | Ala |      |
| 225 |     |     |     |     | 670 |     |     |     |     | 675 |     |     |     |     | 680 |     |      |
| 227 | gga | agc | agc | gtc | aca | ggt | tac | tat | aat | ccc | gcc | aat | aca | gta | ctt | aat | 2297 |
| 228 | Gly | Ser | Ser | Val | Thr | Val | Tyr | Tyr | Asn | Pro | Ala | Asn | Thr | Val | Leu | Asn |      |
| 229 |     |     | 685 |     |     |     |     |     | 690 |     |     |     |     | 695 |     |     |      |
| 231 | ggt | aaa | cct | gaa | att | tgg | ttc | aga | tgt | tca | ttt | aat | cgc | tgg | act | cac | 2345 |
| 232 | Gly | Lys | Pro | Glu | Ile | Trp | Phe | Arg | Cys | Ser | Phe | Asn | Arg | Trp | Thr | His |      |
| 233 |     |     | 700 |     |     |     |     | 705 |     |     |     |     | 710 |     |     |     |      |
| 235 | cgc | ctg | ggt | cca | ttg | cca | cct | cag | aaa | atg | tcg | cct | gct | gaa | aat | ggc | 2393 |
| 236 | Arg | Leu | Gly | Pro | Leu | Pro | Pro | Gln | Lys | Met | Ser | Pro | Ala | Glu | Asn | Gly |      |
| 237 |     | 715 |     |     |     |     | 720 |     |     |     | 725 |     |     |     |     |     |      |
| 239 | acc | cat | gtc | aga | gca | act | gtg | aag | ggt | cca | ttg | gat | gca | tat | atg | atg | 2441 |
| 240 | Thr | His | Val | Arg | Ala | Thr | Val | Lys | Val | Pro | Leu | Asp | Ala | Tyr | Met | Met |      |
| 241 | 730 |     |     |     |     | 735 |     |     |     |     | 740 |     |     |     | 745 |     |      |
| 243 | gat | ttt | gta | ttt | tcc | gag | aga | gaa | gat | ggt | ggg | att | ttt | gac | aat | aag | 2489 |
| 244 | Asp | Phe | Val | Phe | Ser | Glu | Arg | Glu | Asp | Gly | Gly | Ile | Phe | Asp | Asn | Lys |      |
| 245 |     |     |     |     | 750 |     |     |     |     | 755 |     |     |     |     | 760 |     |      |
| 247 | agc | gga | atg | gac | tat | cac | ata | cct | gtg | ttt | gga | gga | gtc | gct | aaa | gaa | 2537 |
| 248 | Ser | Gly | Met | Asp | Tyr | His | Ile | Pro | Val | Phe | Gly | Gly | Val | Ala | Lys | Glu |      |
| 249 |     |     | 765 |     |     |     |     |     | 770 |     |     |     |     | 775 |     |     |      |
| 251 | cct | cca | atg | cat | att | gtc | cat | att | gct | gtc | gaa | atg | gca | cca | att | gca | 2585 |
| 252 | Pro | Pro | Met | His | Ile | Val | His | Ile | Ala | Val | Glu | Met | Ala | Pro | Ile | Ala |      |
| 253 |     |     | 780 |     |     |     |     |     | 785 |     |     |     |     | 790 |     |     |      |
| 255 | aag | gtg | gga | ggc | ctt | ggt | gat | ggt | ggt | act | agt | ctt | tcc | cgt | gct | ggt | 2633 |

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|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|------|
| 256 | Lys | Val | Gly | Gly  | Leu | Gly | Asp | Val | Val  | Thr | Ser | Leu | Ser | Arg  | Ala  | Val |      |
| 257 |     | 795 |     |      |     |     | 800 |     |      |     |     | 805 |     |      |      |     |      |
| 259 | caa | gat | tta | aac  | cat | aat | gtg | gat | att  | atc | tta | cct | aag | tat  | gac  | tgt | 2681 |
| 260 | Gln | Asp | Leu | Asn  | His | Asn | Val | Asp | Ile  | Ile | Leu | Pro | Lys | Tyr  | Asp  | Cys |      |
| 261 | 810 |     |     |      |     | 815 |     |     |      |     | 820 |     |     |      | 825  |     |      |
| 263 | ttg | aag | atg | aat  | aat | gtg | aag | gac | ttt  | cgg | ttt | cac | aaa | aac  | tac  | ttt | 2729 |
| 264 | Leu | Lys | Met | Asn  | Asn | Val | Lys | Asp | Phe  | Arg | Phe | His | Lys | Asn  | Tyr  | Phe |      |
| 265 |     |     |     |      | 830 |     |     |     |      | 835 |     |     |     |      | 840  |     |      |
| 267 | tgg | ggt | ggg | act  | gaa | ata | aaa | gta | tgg  | ttt | gga | aag | gtg | gaa  | ggt  | ctc | 2777 |
| 268 | Trp | Gly | Gly | Thr  | Glu | Ile | Lys | Val | Trp  | Phe | Gly | Lys | Val | Glu  | Gly  | Leu |      |
| 269 |     |     |     | 845  |     |     |     |     | 850  |     |     |     |     | 855  |      |     |      |
| 271 | tcg | gtc | tat | ttt  | ttg | gag | cct | caa | aac  | ggg | tta | ttt | tcg | aaa  | ggg  | tgc | 2825 |
| 272 | Ser | Val | Tyr | Phe  | Leu | Glu | Pro | Gln | Asn  | Gly | Leu | Phe | Ser | Lys  | Gly  | Cys |      |
| 273 |     |     | 860 |      |     |     | 865 |     |      |     |     | 870 |     |      |      |     |      |
| 275 | gtc | tat | ggt | tgt  | agc | aat | gat | ggt | gaa  | cga | ttt | ggt | ttc | ttc  | tgt  | cac | 2873 |
| 276 | Val | Tyr | Gly | Cys  | Ser | Asn | Asp | Gly | Glu  | Arg | Phe | Gly | Phe | Phe  | Cys  | His |      |
| 277 |     | 875 |     |      |     | 880 |     |     |      |     | 885 |     |     |      |      |     |      |
| 279 | gcg | gct | ttg | gag  | ttt | ctt | ctg | caa | ggt  | gga | ttt | agt | ccg | gat  | atc  | att | 2921 |
| 280 | Ala | Ala | Leu | Glu  | Phe | Leu | Leu | Gln | Gly  | Gly | Phe | Ser | Pro | Asp  | Ile  | Ile |      |
| 281 | 890 |     |     |      |     | 895 |     |     |      | 900 |     |     |     |      | 905  |     |      |
| 283 | cat | tgc | cat | gat  | tgg | tct | agt | gct | cct  | ggt | gct | tgg | ctc | ttt  | aag  | gaa | 2969 |
| 284 | His | Cys | His | Asp  | Trp | Ser | Ser | Ala | Pro  | Val | Ala | Trp | Leu | Phe  | Lys  | Glu |      |
| 285 |     |     |     | 910  |     |     |     |     | 915  |     |     |     |     |      | 920  |     |      |
| 287 | caa | tat | aca | cac  | tat | ggt | cta | agc | aaa  | tct | cgt | ata | gtc | ttc  | acg  | ata | 3017 |
| 288 | Gln | Tyr | Thr | His  | Tyr | Gly | Leu | Ser | Lys  | Ser | Arg | Ile | Val | Phe  | Thr  | Ile |      |
| 289 |     |     |     | 925  |     |     |     |     | 930  |     |     |     |     | 935  |      |     |      |
| 291 | cat | aat | ctt | gaa  | ttt | ggg | gca | gat | ctc  | att | ggg | aga | gca | atg  | act  | aac | 3065 |
| 292 | His | Asn | Leu | Glu  | Phe | Gly | Ala | Asp | Leu  | Ile | Gly | Arg | Ala | Met  | Thr  | Asn |      |
| 293 |     |     | 940 |      |     |     | 945 |     |      |     |     | 950 |     |      |      |     |      |
| 295 | gca | gac | aaa | gct  | aca | aca | gtt | tca | cca  | act | tac | tca | cag | gag  | gtg  | tct | 3113 |
| 296 | Ala | Asp | Lys | Ala  | Thr | Thr | Val | Ser | Pro  | Thr | Tyr | Ser | Gln | Glu  | Val  | Ser |      |
| 297 |     | 955 |     |      |     |     | 960 |     |      |     |     | 965 |     |      |      |     |      |
| 299 | gga | aac | cct | gta  | att | gcg | cct | cac | ctt  | cac | aag | ttc | cat | ggt  | ata  | gtg | 3161 |
| 300 | Gly | Asn | Pro | Val  | Ile | Ala | Pro | His | Leu  | His | Lys | Phe | His | Gly  | Ile  | Val |      |
| 301 | 970 |     |     |      |     | 975 |     |     |      |     | 980 |     |     |      | 985  |     |      |
| 303 | aat | ggg | att | gac  | cca | gat | att | tgg | gat  | cct | tta | aac | gat | aag  | ttc  | att | 3209 |
| 304 | Asn | Gly | Ile | Asp  | Pro | Asp | Ile | Trp | Asp  | Pro | Leu | Asn | Asp | Lys  | Phe  | Ile |      |
| 305 |     |     |     | 990  |     |     |     |     | 995  |     |     |     |     |      | 1000 |     |      |
| 307 | ccg | att | ccg | tac  | acc | tca | gaa | aac | gtt  | gtt | gaa | ggc | aaa | aca  | gca  |     | 3254 |
| 308 | Pro | Ile | Pro | Tyr  | Thr | Ser | Glu | Asn | Val  | Val | Glu | Gly | Lys | Thr  | Ala  |     |      |
| 309 |     |     |     | 1005 |     |     |     |     | 1010 |     |     |     |     | 1015 |      |     |      |
| 311 | gcc | aag | gaa | gct  | ttg | cag | cga | aaa | ctt  | gga | ctg | aaa | cag | gct  | gac  |     | 3299 |
| 312 | Ala | Lys | Glu | Ala  | Leu | Gln | Arg | Lys | Leu  | Gly | Leu | Lys | Gln | Ala  | Asp  |     |      |
| 313 |     |     |     | 1020 |     |     |     |     | 1025 |     |     |     |     | 1030 |      |     |      |
| 315 | ctt | cct | ttg | gta  | gga | att | atc | acc | cgc  | tta | act | cac | cag | aaa  | gga  |     | 3344 |
| 316 | Leu | Pro | Leu | Val  | Gly | Ile | Ile | Thr | Arg  | Leu | Thr | His | Gln | Lys  | Gly  |     |      |
| 317 |     |     |     | 1035 |     |     |     |     | 1040 |     |     |     |     | 1045 |      |     |      |
| 319 | atc | cac | ctc | att  | aaa | cat | gct | att | tgg  | cgc | acc | ttg | gaa | cgg  | aac  |     | 3389 |
| 320 | Ile | His | Leu | Ile  | Lys | His | Ala | Ile | Trp  | Arg | Thr | Leu | Glu | Arg  | Asn  |     |      |

RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 07/12/2005

PATENT APPLICATION: US/10/539,723

TIME: 10:02:56

Input Set : N:\RJAVED\10539723.txt

Output Set: N:\CRF4\07122005\J539723.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 5

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/539,723

DATE: 07/12/2005

TIME: 10:02:56

Input Set : N:\RJAVED\10539723.txt

Output Set: N:\CRF4\07122005\J539723.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:48 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:28